

0986616-040501  
T 05040 9192260

1 I claim:

2  
3 1) A method of determining if a printing process operated correctly comprising the  
4 steps of:  
5 digitally watermarking an image, said watermark being redundantly applied in  
6 multiple areas of said image,  
7 printing said image on a carrier,  
8 acquiring a second image of the image printed on said carrier,  
9 reading the digital watermark data from each area of said second image,  
10 determining the quality of the printing from the acquired digital watermark data.

11  
12 2) The method recited in claim 1 wherein said watermark includes a grid signal.

13  
14 3) The method recited in claim 1 wherein said carrier is a label.

15  
16 4) The method recited in claim 1 wherein said second image is acquired using a  
17 digital camera.

18  
19 5) The method recited in claim 3 wherein said label is rejected if said digital  
20 watermark data does not meet certain criteria.

21  
22 6) The method recited in claim 1 wherein quality is deemed unacceptable if digital  
23 watermark data can not be read from each area of said second image.

24  
25 7) The method recited in claim 2 wherein said quality is deemed unacceptable if  
26 said grid signal can not be read from each area of said image.

27  
28 8) A method of determining the quality of a printed image comprising the steps of:  
29 digitally modifying said first image to embed a digital watermark in said image,  
30 printing said first image onto a carrier to create a printed image,

- 1 acquiring a second image of said printed image,
- 2 reading said watermark from said second image to generate watermark data, and
- 3 determining the quality of said printing from said watermark data.
- 4
- 5 9) The method recited in claim 8 wherein said carrier is a label.
- 6
- 7 10) The method recited in claim 8 wherein said watermark comprises a grid signal.
- 8
- 9 11) The method recited in claim 8 wherein said watermark includes a grid signal.
- 10
- 11 12) The method recited in claim 8 wherein said watermark is redundantly embedded
- 12 in multiple areas of said image.
- 13
- 14 13) The method recited in claim 12 wherein said carrier is a label.
- 15
- 16 14) The method recited in claim 13 wherein said label is rejected if said watermark
- 17 can not be read from at least one area of said label.
- 18
- 19 15) A system for determining the quality of a printed image, said printed image
- 20 including a digital watermark, said watermark being redundantly applied to multiple
- 21 areas of said printed image, said system comprising,
- 22 an image capture device for acquiring a second image of said printed image,
- 23 a watermark reading program for reading watermark information from each of said
- 24 areas of said image,
- 25 examining the magnitude of watermark information to determine the quality of said
- 26 printing.
- 27
- 28 16) The system recited in claim 16 wherein said digital watermark includes a grid
- 29 signal.
- 30

1 17) A system for determining if the quality of printed labels is acceptable, said labels  
2 being printed with an image which includes a digital watermark embedded in  
3 multiple areas of said image,  
4 means for acquiring an image of said labels after said labels have been printed,  
5 means for reading watermark data from each area of said image of said labels,  
6 means for indicating that the quality of said labels is unacceptable if the watermark  
7 data read from each area of said image does not meet specified criteria.

8  
9 18) The system recited in claim 17 wherein said digital watermark includes a grid  
10 signal.